/HRTGen/

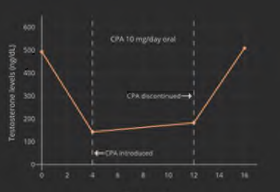
Male to Female Guide

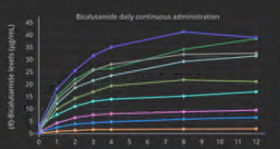
Quickguide v2.5T (2022)

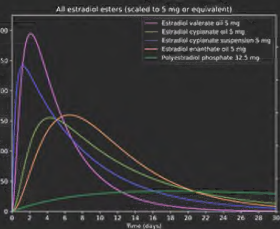
PROCEED WITH CAUTION

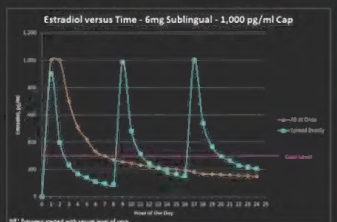
These medications can cause serious health problems that you should informed on, alert for, and doing your due diligence in prevention and self-monitoring.
Anti-androgens such as **cypro** and **bica** can cause acute, severe, and life threatening liver problems in rare cases.
Spiro can cause hyperkalemia, which can lead to sudden cardiac arrest.
Deep venous thrombosis is a possible risk of estradiol and cypro at higher doses. Any form of estradiol will raise chances of blood clots, but some more than others.

However, the overall risk of HRT is fairly low, if you take responsible doses, self-monitor, do breast self-exams, and be educated/alert for any symptoms that may indicate major health problems.
Minimizing or eliminating drug use, drinking, and smoking is a good idea as is maintaining a healthy diet and lifestyle.









HRT OVERVIEW

Hormone Replacement Therapy (HRT) will change your life. The most common way to start is to take both an anti-androgen (AA) and an estrogen (E). The function of the AA is to tell cells to stop acting male, and the function of the estrogen is to tell cells to act female.

The AA is responsible for blocking testosterone (T) from acting on the androgen receptors (ARs) of cells. Some AAs will also damage testosterone production over time, and most but not all will result in lowering testosterone levels. The estrogen will activate estrogen receptors (ERs) in cells, which tells them to become female. When the brain detects higher levels of estrogen it will also start telling the body to produce less testosterone.

The combination of an estrogen and an anti-androgen can have tremendous feminizing effects. The most noticeable of these are skin softening, breast development, reduced body hair, stopping/reversing male pattern baldness, muscle atrophy, and redistribution of body fat into a female shape. These changes can make someone look exceedingly more feminine in the face and body, and in the worst cases only younger looking.

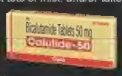
The results of HRT are also heavily dependent on the individual's health, genetics, and age. Different people can have vastly different results from the same treatment. Thus the goal of HRT is to optimize your dose and regiment to fit with your body's individual biology. Knowing the symptoms to watch for and taking blood tests regularly are crucial to ensuing the safest and most effective medical transition possible.

This guide is being provided in the interest of harm reduction, suicide prevention, and promoting responsible HRT. It is not intended to be a substitute for professional medical advice. When taking HRT it is advisable to be under the care of a physician you respect and trust, so that your health can be monitored and so you can get prompt treatment in case of any complications.

1. ANTI-ANDROGEN (AA)

a) CYPROTERONE ACETATE (CYPRO, CPA)

Dosage: 5-12.5mg/day. Studies have show 10mg to be effective as an AA (50-70% lowered T @10mg/day).
Action: Strong AA. Nukes T production and weakly blocks T.
Due diligence: Doses above 12.5mg are not reccomended. Higher doses for prolonged periods are linked to venous thromboembolism and benign brain tumors. May raise prolactin levels. Monitor yourself for pseudo-lactation and monitor prolactin levels via blood tests. Higher doses of 100mg/day are associated with liver toxicity. Cypro is linked to vitamin B12 deficiency. To prevent B12 deficency you should eat animal products, drink lots of milk, and/or take a B12 supplement to ensure healthy B12 levels.
Info: Effective in reducing general gonad function. Affordable AA.

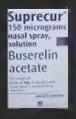


b) BICALUTAMIDE (BICA)

Dosage: 25-100mg/day. 10-25mg/day will block female T levels which is achieved via estradiol at a sufficent dose.
If not taking estradiol or if you have male levels you will need 50mg/day or more. 100-150mg/day at minimum appears to be needed to fully or near-fully block 600ng/dL T.
Action: Androgen receptor antagonist (blocks androgens). Does not lower T but it does blocks its effects with sufficient dosages.
Due diligence: Avoid if you have a history of liver issues. Low incidence rate of liver level changes, and lower rates of liver toxicity. Issues present themselves in first 3-4mo.
Info: Less effective at reducing general gonad function. More expensive AA. Buildup time for bica to 50% of steady levels is reached after 1 week, about 80-90% steady state levels after 3-4 weeks, and 100% after 6-12 weeks of continuous daily administration.

c) SPIRONOLACTONE (SPIRO)

Dosage: 50-200mg/day. At doses of 50-200mg/day spiro is more effective at blocking female T levels levels and less suited at blocking male T levels.
Action: A potassium sparing diuretic that is a weak AA. Weakly blocks production of androgens, and blocks androgens.
Due diligence: Avoid potassium supplements. Avoid if you have kidney issues. Higher doses of spiro is associated with elevated cortisol levels (visceral adiposity), brain fog, and depression.
Info: Makes you pee a lot. Affordable AA. Off-target action with high antimineralocorticoid activity and mixed estrogenic and antiestrogenic or SERM-like activity (which has been implicated in having a negative impact on breast development).



d) GNRH AGONISTS (GNRH, GNRHA)

Types: Buserelin, Lupron (leuprorelin), Goserelin, Triptorelin.
Action: Nukes LH/FSH, thus gonadal androgen production, and causes pituitary to be densensitized to GnRH (GnRH causes release of LH/FSH) with consistent usage.
Info: Great alternatives if they can be obtained affordably. i.e. they are prohibitively expensive for most, and may be available through your GP/endo via insurance/public healthcare.

e) ESTRADIOL MONOTHERAPY (E MONO, E MONOTHERAPY)

Dosage: Estradiol (e2) levels of 200pg/ml suppress T levels by ~90%, and e2 levels between 200-500pg/ml suppress T levels by ~90-95%. This may vary due to capacity for gonads to produce androgens (e.g. T), and therefore your "monotherapy levels" may differ here (e.g. 90% suppression of 400ng/dL is "sufficent" as compared to 90% suppression of 700ng/dL).
Action: Lowers LH/FSH via the brain registering it has sex hormones, and via lowering LH/FSH it tells the gonads to stop producing T.
Info: Easily and reliably attainable via injections. Can be attained via patches, gel, or sublingual.

2. ESTROGEN (E)

a) INJECTIONS

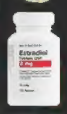
Types: Estradiol valerate (EV) is cheap and widely available via prescription. Estradiol cyprionate (EC) is more expensive. Estradiol enanthate (EEn) is the longest lasting and is considered the best for injecting every two weeks. EV has higher and faster initial peak that quickly drops off. EC has a lower initial peak, but it lasts longer and gives steadier levels. EEn peaks slower than EC, has slightly higher overall levels, and is similarly steady for levels.
Dosing: Adjust dose based on blood tests. EV is injected at once a week or less. EC & EEn are better for 2 weeks. Check the concentration of the vials. For concentration of 40mg/mL then you need 0.25mL to get 10mg of estradiol.
Info: Can be done intramuscularly (IM) or subcutaneously (SubQ). Similar efficacy, potency, and levels for each administration method for EC (per studies).

b) TRANSDERMAL

Types: Patches or gels. Patches come in reservoir or matrix forms. Changing patches: reservoir every 3.5 days, matrix every 7 days.
Dosing: Patches start at either 50-100µg. 150-200µg or more is the final dose per your goal levels & labs. 100µg patch is approximately equal to 100pg/ml for levels. Transdermal gel starts at an equivelant dosage. Gel with 0.06% concentration has 1.5mg estradiol in 2.5g gel. Estradiol levels achieved with 1.5mg of estradiol gel are similar to those with a 50µg patch.
Info: Patches are known to leave visible residue after removal. Reservoir patches are known to cause skin reactions (~14.2% occurrence rate). Gel and transdermal application areas do change absorption, and smaller application areas for gel gives higher levels.
Application area effectiveness: scrotum > buttocks > stomach > thigh = arm > hand = foot.

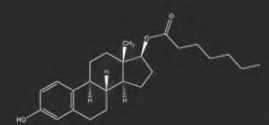
c) SUBLINGUAL (SUB) & BUCCAL

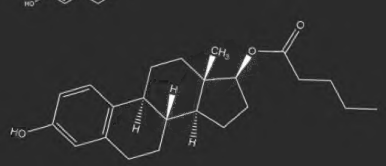
Types: Estradiol hemihydrate (17-beta estradiol) or estradiol valerate (EV) pills can be used.
Dosing: Start at 2mg/day and later increase to 4-6mg/day. Split doses throughout the day as to maintain steadier levels. 2mg dosing example: 0.5mg/4x day (e.g. 16hr day: every 4hrs take 0.5mg). It is recommended to split your dose >=3/day for more stable levels.
Info: Sublingual administration method is to dissolve under your tounge, and buccal is to dissolve between your cheek and gums. Do not eat or drink while they're dissolving. Wait 10-15min before eating or drinking after the pills have dissolved. Splitting or crushing the pills may help them dissolve faster. This is especially applicable to pills such as progynova (EV) due to the sugar coating.

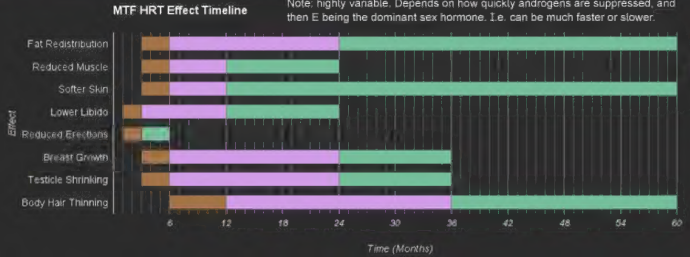


d) ORAL

Types: Estradiol hemihydrate (17-beta estradiol) or estradiol valerate (EV) pills can be used. 2mg EV is roughly equivalent to 1.5mg estradiol hemihydrate.
Dosing: Start at 2mg/day and later increase to 6-8mg/day. Split doses throughout the day as to maintain steadier levels. 2mg dosing example: 0.5mg/4x day (e.g. 16hr day: every 4hrs take 0.5mg). It is recommended to split your dose >=3/day for more stable levels.
Info: Oral administration method is to swallow the tablets. Significanly raises SHBG levels. 5-10mg/daily boron is recommended to counteract this. Due to lower e2 levels the main consideration when starting on oral e is T suppression. Cypro is more reliable here, and for bica it's reccomended to get a pre-hrt blood test (for T) as to determine the proper dosage as to block T.







3. QUICK DOSING GUIDE

MONOTHERAPY DOSING (INJECTIONS)

Use "injectable estradiol simulator" to refine dose (search it).
Example 250pg/ml trough estradiol monotherapy dosages:

ESTER	DOSAGE
EV	5mg/5days or 9mg/week
EC	5mg/week or 15mg/2 weeks
EEn	4mg/week or 14mg/2 weeks

ANTI-ANDROGEN DOSING

These are "typical" doses for these AAs.

AA	DOSAGE
Cypro	5-12.5mg/day
Bica	50-100mg/day
Spiro	50-200mg/day

SEE DETAILED GUIDE FOR MORE INFO

4. QUICK METHOD GUIDE

After 3 months double estradiol doses. Maximal doses noted in estrogens. Starting on high levels of e2 is associated with slowed breast growth.
After a year, or reaching tanner 3-4, switch to injections (monotherapy dose) + progesterone (200mg rectal).

SEE DETAILED GUIDE FOR MORE INFO.

5. BLOOD TESTS (LABS)

Labs are useful as it's an objective measurement of your hormone levels. Labs are also **very useful** in diagnosing issues and providing assistance.

Trough
Get labs at your **trough**. Trough means right before your next dose. Trough is important because you can gauge T suppression, your lowest E levels, and if you should adjust your dose.

Lab frequency
Get labs, when starting, at the 3mo mark. While adjusting your dose keep getting labs every 3mo. When your dose is refined, you can bump it to every 6mo-1yr.

Test for (always)
- -Estradiol (e2)
- -Testosterone (T)
- -LH/FSH

Test for (conditional)
- -Estrone (e1) - If: on oral e
- -DHT - If: masculinization signs with suppressed T
- -AST & ALT (Liver) - If: on bica or >=50mg cypro
- -SHBG - If goal: optimize free e2
- -Prolactin - If: on cypro
- -Potassium - If: on spiro

Liver toxicity is dangerous, it can lead to serious complications, and even death. That is, despite low incident rates for bica. If you're on a higher dose of cypro then get liver levels tested as higher doses are associated with liver toxicity.

Target E levels
E2:E1 ratios, < 1.8 E2:E1 ratios
Free E: >= 1.5%

Target E2 monotherapy levels
200-300 pg/mL
735-1,100 pmol/L
(1pg/mL = 3.671 pmol/L)

Target Total T levels
10-54 ng/dL
0.34-1.87 nmol/L
(1ng/dL = 0.0347 nmol/L)

SEE DETAILED GUIDE FOR MORE INFO

6. ACQUIRING MEDS

The safest way is via your local pharmacy with a doctor's prescription, but this can be very difficult or impossible to option depending on your situation.
Lists of sources are provided in each thread. Since every country is different, e.g. varying strictness of customs, and sources constantly change, please read the thread and ask for help if you need it.

SEE DETAILED GUIDE FOR CUSTOMS INFO

7. STALLED BREAST GROWTH TIPS

Cycle oral e 2-6mg/daily ontop of usual regimen, 3mo on, and 3mo off. Tip is for when you're on e2 injections.
Cycle progesterone, 2 weeks on, and 2 weeks off (gel on breasts and/or suppository).
You may alter these cycle lengths to your preference.

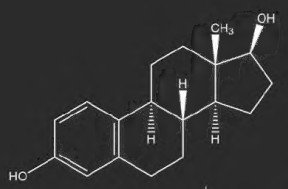
SEE DETAILED GUIDE FOR MORE INFO

8. FEMINIZING & PREVENTING BREAST GROWTH

Feminization without any breast growth cannot be done with 100% reliability.
Raloxifene, a SERM, is commonly used to stunt, stall, or somewhat revert breat tissue growth. Ralox will, in conjunction with e2, be a competitive antagonist to e2 when it comes to breast growth (thus ratox dosage should out compete e2).

Methods
- Ralox 60-120mg/day (increases serum T/LH/FSH lvls).
- Ralox gel on breasts (2.5-5mg per breast, daily).
- DHT gel on breasts has direct anti-estrogenic action on breast cells and cannot be aromatized to e2 (unlike T).
- Cypro monotherapy has been done, but low sex hormones causes issues (bone mineral density and lacking neurosteroidal action of sex hormones).
- Bica monotherapy has also been done, but heightened T levels will be aromatized into e2 (90% get gynecomastia).
- Do not weight cycle. Similarly, one would want to maintain weight/low healthy BMI. I.e. prevent/lessen breast fat.

Regimens (examples)
- 50mg bica + 12.5mg cypro + 60mg ralox
- 100-150mg bica + aromatase inhibitor + 60mg ralox
- GnRHa + 50mg bica + 60mg ralox + low-mid dose e2



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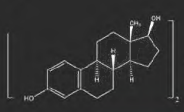

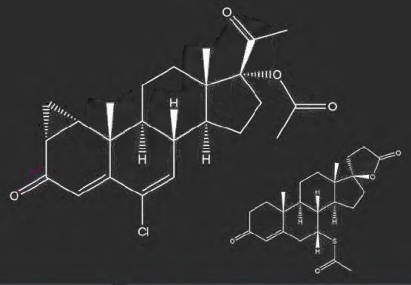

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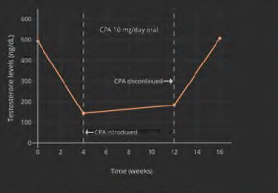
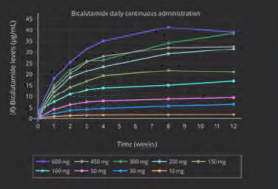
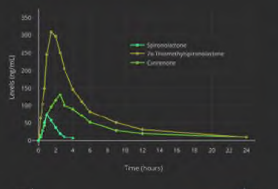
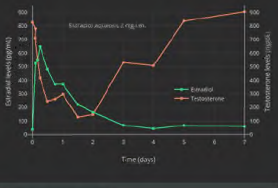








1. ANTI-ANDROGEN (AA)

a) CYPROTERONE ACETATE (CYPRO, CPA)
Dosage: 5-12.5mg/day (cutting 50mg pill into 4 pieces). Studies have show 10mg to be effective as an AA (50-70% lowered T @10mg/day).
Action: Strong steroidal AA, progestogen, and antigonadotropin. Nukes T production and weakly blocks T at the AR level (lowers T levels and blocks T).
Due diligence: Doses above 12.5mg are not recommended as higher doses for prolonged periods are linked to venous thromboembolism, prolactinoma and meningioma (benign brain tumors). May raise prolactin levels. Monitor yourself for pseudo-lactation and monitor prolactin levels via blood tests. Higher doses of 100mg/day are associated with liver toxicity. In general cypro is linked to vitamin B12 deficiency. To prevent B12 deficency you should eat animal products, drink lots of milk, and/or take a B12 supplement to ensure healthy B12 levels.
Info: Effective in reducing erections and general function of gonads. Affordable AA.

b) BICALUTAMIDE (BICA)
Dosage: 25-100mg/day. 10-25mg/day will block female T levels which is achieved via estradiol at a sufficent dose. If not taking estradiol or if you have male levels you will need 50mg/day or more. 100-150mg/day at minimum appears to be needed to fully or near-fully block 800ng/dL T.
Action: Silent non-steroidal AR antagonist (blocks T at the receptor level, and stops cells from being male). Does not lower T but it does blocks its effects with sufficient dosages. In conjunction with E bica increases T levels by 20-70%. Due to the blockage of the AR and T being unutilized aromatization occurs (T -> E) and may slightly raise E levels.
Due diligence: Bica has a low incidence rate of unfavorable liver level changes (3% at 150mg/day). Liver changes usually occur within the first 3 or 4 months of treatment, and therefore one should monitor liver levels in these first three months. It's advisable to get liver levels tested every 3-6mo. Liver toxicity (hepatoxicity) is rare with bica, and is lower than the incidence rate of flutamide (.03% or 3 per 10,000). Avoid if you have a history of liver issues.
Info: Less effective at reducing general function of gonads. More expensive AA. Buildup time for bica to 50% of steady levels is reached after 1 week, about 80-90% steady state levels after 3-4 weeks, and 100% after 6-12 weeks of continuous daily administration.

c) SPIRONOLACTONE (SPIRO)
Dosage: 50-200mg/day. At doses of 50-200mg/day spiro is more effective at blocking female T levels levels and less suited at blocking male T levels.
Action: A potassium sparing diuretic that is a weak AA. AR antagonist (blocks androgens) that also blocks androgen synthesis (i.e. weakly blocks T from being produced). Variable efficacy at reducing T levels (ranges from nil to slight reduction). Main action is via being an AR antagonist (blocking the AR). It has a similar action as bica, but bica is far superior in this regard as per studies.
Due diligence: Due to being a potassium sparing diuretic avoid potassium supplements. Risk factors for high potassium levels (hyperkalemia) includes old age, kidney disease, concomitant use of other potassium-elevating drugs, and intake of potassium supplements. In studies on children or young adults taking spiro their potassium levels weren't significanly raised. At higher doses spiro use has been associated with elevated cortisol levels (associated with visceral adiposity), brain fog, and depression.
Info: Makes you pee a lot (somewhat mitigated via NSAIDs such as asprin). Affordable AA at <=100mg dose. Also used as an anti-acne treatment and for hypertension (high blood pressure). Has off-target action with high antimineralocorticoid activity and mixed weak estrogenic and antiestrogenic or SERM-like activity (which has been implicated in having a negative impact on breast development, but effects are "weak" here so it's debatable).

d) GNRH AGONISTS (GNRH, GNRHA)
Types: Buserelin, Lupron (leuprorelin), Goserelin, Triptorelin.
Action: Agonists of the GnRH receptor which causes the pituitary gland to initially "spike" LH/FSH levels (LH causes leydig cells to release T), and then to become desensitized to GnRH (thus nuking LH/FSH). It is like pressing the button that tells the pituitary to constantly release LH/FSH, in response to these GnRH agonists, which causes it to "run out of fuel" and to become desensitized to GnRH. Thersby, little to no LH/FSH is released with continuous usage because we're always pressing this button.
Info: Gold standard for suppressing LH/testosterone. Great alternatives if they can be obtained affordably, i.e. they are prohibitively expensive for most, and may be available through your GP/endo via insurance/public healthcare. Majority of "side effects" noted online are due to lacking sex hormones (E2/Tlet/c) and therefore don't apply w/HRT.

e) ESTRADIOL MONOTHERAPY (E MONO, E MONOTHERAPY)
Dosage: Estradiol (e2) levels of 200pg/ml suppress T levels by ~90%, and e2 levels between 200-500pg/mL suppress T levels by ~90-95%. This may vary due to capacity for gonads to produce androgens (e.g. T), and therefore your "monotherapy levels" may differ here (e.g. 90% suppression of 400ng/dL is "sufficent" as compared to 90% suppression of 700ng/dL).
Action: Lowers LH/FSH via the brain registering it has sex hormones, and via lowering LH/FSH it tells the gonads to stop producing T. In otherwords, on the HPG axis it creates a negative feedback loop, lowers LH/FSH, and results in T production via the gonads significantly dropping with sufficent e2 levels (also lowers sperm production via lowering FSH levels).
Info: Easily and reliably attainable via injections. Can be attained via patches, gel, or sublingual.

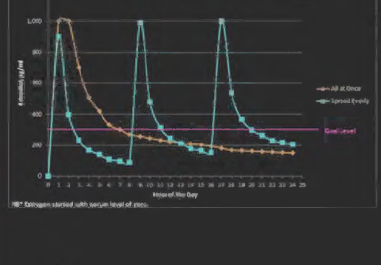
2. ESTROGEN (E)

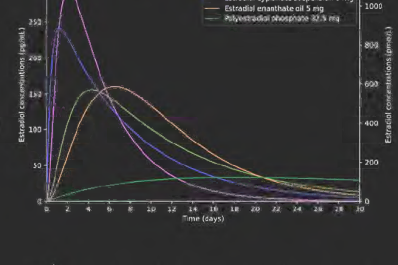
a) INJECTIONS
Types: Estradiol valerate (EV) is cheap and widely available via prescription. It has a higher and faster initial peak that quickly drops off. Estradiol cypronate (EC) is more expensive, has a lower initial peak, but it lasts longer and gives steadier levels. Estradiol enanthate (EEn) is the longest lasting and is considered the best for injecting every two weeks. It peaks slightly slower than EC, has slightly higher overall levels, and is similarly steady for levels.
Dosing: Adjust dose as needed based on blood tests. EV is injected at once a week or less. EC & EEn are better if you want to go two weeks between injections. Make sure to check the concentration on the vials. If the concentration is 40mg/mL then you need 0.25mL to get 10mg of estradiol. Utilize the "injectable estradiol simulator" (search it) for determining dose and injection frequency (cycle length). With a 250pg/ml trough for estradiol monotherapy dosages are: 5mg/5days or 9mg/week for EV, 5mg/week for EC and 4mg/week EEn.
Info: Can be done intramuscularly (IM) or subcutaneously (SubQ, SQ). Similar efficacy, potency, and levels for each administration method for EC (per studies).

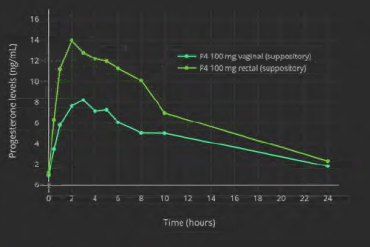
b) TRANSDERMAL
Types: Patches or gels. Patches come in reservoir or matrix forms. Reservoir patches are to be changed every 3.5 days. Matrix patches are to be changed every 7 days.
Dosing: Patches start at either 50-100µg depending on preferences and AA. 150-200µg or more is the final dose per your goal levels & labs. 100µg patch is approximately equal to 100pg/ml for levels. Transdermal gel starts at an equivelant dosage of 50-100µg patches. Gel with 0.06% concentration has 1.5mg estradiol in 2.5g gel. Estradiol levels achieved with 1.5mg of estradiol gel are similar to those with a 50µg patch, and 100µg patch is roughly equivelant to 3mg of gel. Gel must be applied daily.
Info: Patches are known to leave visible residue after removal. Reservoir patches are known to cause skin reactions (~14.2% occurrence rate). Gel and transdermal application areas do change absorption, and smaller application areas for gel gives higher levels. Factors which may contribute to inter- and intraindividual variability with transdermal estradiol include skin location and thickness; hair follicle density; solvent (alcohol) evaporation; skin dehydration, ambient temperature, and humidity; and reservoir size (for reservoir patches). Application area effectiveness: scrotum > buttocks > stomach > thigh = arm > hand = foot.

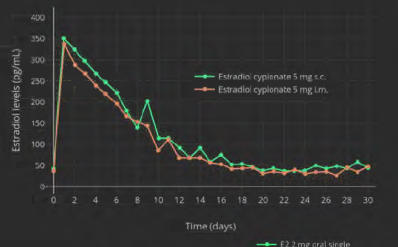
c) SUBLINGUAL (SUB) & BUCCAL
Types: Estradiol hemihydrate (17-beta estradiol) or estradiol valerate (EV) pills can be used.
Dosing: Start at 2mg/day and later increase to 4-6mg/day. Split doses throughout the day as to maintain steadier levels. 2mg dosing example: 0.5mg/4x day (e.g. 16hr day every 4hrs take 0.5mg). It is recommended to split your dose >=3/day for more stable levels (single-dose sub e2 half-life ranges from 8-20hrs for 0.5mg-1mg).
Info: Sublingual administration method is to dissolve under your tounge, and buccal is to dissolve between your cheek and gums. Do not eat or drink while they're dissolving, and it's a general rule of thumb to wait 10-15min before eating or drinking after the pills have dissolved. Splitting or crushing the pills may help them dissolve faster, and this is especially applicable to pills such as progynova (EV) due to its sugar coating. Sub e has an estrone (e1) spike ~2hrs after administration, and it has been speculated that this is the result in estradiol being taken up by the reticuloendothelial system and then metabolized into estrone (i.e. it is not via "accidental swallowing" primarily).

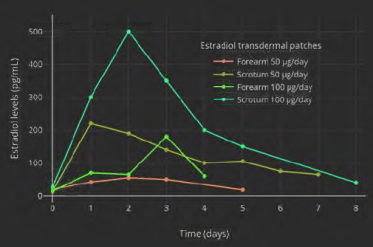
d) ORAL
Types: Estradiol hemihydrate (17-beta estradiol) or estradiol valerate (EV) pills can be used. 2mg EV is roughly equivalent to 1.5mg estradiol hemhydrate.
Dosing: Start at 2mg/day and later increase to 6-8mg/day. Split doses throughout the day as to maintain steadier levels. 2mg dosing example: 0.5mg/4x day (e.g. 16hr day every 4hrs take 0.5mg). It is recommended to split your dose >=3/day for more stable levels (single-dose oral e2 half-life ranges from 13-20hrs for 0.5mg-8mg).
Info: Oral administration method is to swallow the tablets. Significanly raises SHBG levels (sex hormones, such as e2, bind to SHBG which makes them "inactive" and not "free hormones"), and thus 5-10mg/daily boron is recommended as to counteract this. Due to lower e2 levels the main consideration when starting on oral e is T suppression. Cypro is more reliable here, and for bica it's reccomended to get a pre-hrt blood test (for T) as to determine the proper dosage as to block T.

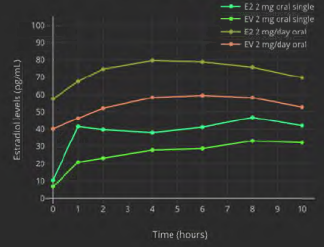












3. METHODS

Goals
1) Androgen (T/DHT) suppression.
2) Estrogens (e2/e1) are in fem range.
3) Optimize free e

Traditional Tanner 1-3 method (feminization priority)
Months 1-3: 2mg/day sub + AA
Months 4-6: 4mg/day sub + AA
Months 7-9: 6mg/day sub + AA
Continue until tanner 3.

Traditional Tanner 1-3 method (fem. priority injections)
Months 1-3: 3mg/7days EV + AA
Months 4-6: 4mg/7days EV + AA
Months 7-9: 6mg/7days EV + AA
Continue until tanner 3.

EV is not the only option here. Comparable doses can be approximated via the injectable estradiol simulator.

Traditional Tanner 1-3 method (breast priority)
Months 1-3: 2mg/day oral + AA
Months 4-6: 4mg/day oral + AA
Months 7-9: 6mg/day oral + AA
Continue until tanner 3.

Traditional Tanner 3-5 method
Monotherapy injections + 200mg rectally administered progesterone at night. Discontinue AA (titrate dose down). Earliest reccomended time is 6-12mo, but preferentially after you've maximixed growth from the tanner 1-3 method.

Monotherapy Injections
Use "injectable estradiol simulator" to refine dose (search it).
Example 250pg/ml trough estradiol monotherapy dosages:

ESTER	DOSAGE
EV	5mg/5days or 9mg/week
EC	5mg/week or 15mg/2 weeks
EEn	4mg/week or 14mg/2 weeks

Optimizing free e
It's reccomended to add boron at 5-10mg/day *after androgens are suppressed* (results in more free sex hormones in general). It's highly reccomended for breast priority route, see **oral** in **ESTROGENS**, and is universally reccomended for all routes as it results in more free e (bioactive e).

Stalled breast growth tips
Cycle oral e 2-6mg/daily ontop of usual regimen, 3mo on, and 3mo off. Tip is for when you're on e2 injections.
Cycle progesterone, 2 weeks on, and 2 weeks off (gel on breasts and/or suppository).
You may alter these cycle lengths to your preference.
If the "potency" wanes in terms of changes then shorten cycle length as receptor desensitization and downregulation exists (i.e. steroids becoming less effective after consistently high doses).
Hints: more estradiol isn't always better! Gain weight!

Progesterone warnings
While progesterone is a 5a-reductase inhibitor (i.e. T - 5a-r -> DHT conversion) there exists the "backdoor" conversion of progesterone to DHT. Elevated progesterone levels are also linked to symptoms of PMS, and due to PMS being hormonally driven it's possible to get these symptoms.
Progesterone isn't strictly necessary to reach tanner 5 as demonstrated by CAIS women (low e2 levels and low male levels of progesterone, but they also have complete androgen insensitivity to contrast).

Breast growth
Reaching tanner 5, on average, takes natal females 1.5-7yrs. Look at tanner stage charts for reference. Ultimate breast size varies, *a lot*, but you can "approximate" your potential size via your familial history. However, this isn't always a reliable indicator as some may be smaller at tanner 5, and some may be larger at tanner 5 compared to natal female family members.

4. BLOOD TESTS (LABS)

Labs are useful as it's an objective measurement of your hormone levels. Labs are also **very useful** in diagnosing issues and providing assistance.

Why?
It's important, especially initially, to confirm that your androgens are suppressed as to not waste time, and to prevent further masculinization.
Furthermore, if on mono e it's in your best interest to confirm your e levels are high enough to suppress T.
However, **it is possible to go on hrt without labs**, but it's more of a process guided via physiological symptoms rather than objective data. Ask in the thread if you have concerns.

Trough
Get labs at your **trough**. Trough means right before your next dose.
F.e. injections, you are on a 7 day injection cycle. Labs on the 7th day. This is right before your next dose.
F.e. sublingual, you are on 4mg/day, you did your dose last night (2x day, spread by 12hrs, 8am/8pm). You get your lab the following morning at 8am.
Trough is important because you can gauge T suppression, your lowest E levels, and if you should adjust your dose.

Lab frequency
Get labs, when starting, at the 3mo mark. While adjusting your dose keep getting labs every 3mo. When your dose is refined/locked-in, you can bump it to every 6mo-1yr (depending on AA).

Test for (always)
-Estradiol (e2)
-Testosterone (T)
-LH/FSH

Test for (conditional)
-Estrone (e1) - If: on oral e
-DHT - If: masculinization signs with suppressed T
-AST & ALT (Liver) - If: on bica or >=50mg cypro
-SHBG - If goal: optimize free e2
-Prolactin - If: on cypro
-Potassium - If: on spiro

Androgen issues
Get a full androgen panel. At minimum, look at T, DHT, and 3a-androstanediol.

Target E levels
E2:E1 ratios: < 1:8 E2:E1 ratios
Free E: >= 1.5%

Target E monotherapy levels
200-300 pg/mL
735-1,100 pmol/L
(1pg/mL = 3.671 pmol/L)

Target Total T levels
10-54 ng/dL
0.34-1.87 nmol/L
(1ng/dL = 0.0347 nmol/L)

Side notes
Get your labs through a professional lab, resources are provided in OP. finger prick tests are unreliable and are not recommended.

5. ACQUIRING MEDS

The safest way is via your local pharmacy with a doctor's prescription, but this can be very difficult or impossible to option depending on your situation.
Lists of sources are provided in each thread. Since every country is different, e.g. varying strictness of customs, and sources constantly change, please read the thread and ask for help if you need it.

CUSTOMS
Worst case scenario if you're caught is almost always going to be that you receive a letter that your package has been seized. Not much you can really do to minimize chances as a receiver expect a few things:

- Use a name that you have recieved mail under before
- Format your address cleanly
- Order smaller amounts at a time if possible

Shipments from a sender within your own country is always the safest option.

Canadian customs: Not too strict, but if a package of meds is intercepted they may blacklist that address.

USA customs: For importing medication there's a limit of "3 months of medication" per the FDA's regulations. If it passes customs then you're good. If your meds are seized you will receive a notice in the mail but otherwise it's just money lost. There is talk that if packages are "repeatedly" seized your address may of been flagged/burned (i.e. customs always inspects your packages). Solution here is to use a different address (e.g. forwarding service).

European customs: Differs per country. Some countries are stricter than others. Generally, if the amount is small and shipped from a close location it's less likely to get seized.

Netherland's customs: Importing medications is prohibited and they may get seized. However, it is noted by anons that customs aren't very strict.

Norway's customs: Package seizure happens somewhat frequently. Rule of thumb is to order in small quantities, and to order from a close location (within Europe or from Russia).

Finland's customs: Anons have said finland has strict customs, but some anons get packages through just fine (from sellers within the EU).

Australia's customs: Notoriously difficult to get past customs. 3mo prescription rule and requires an included prescription. You may receive an omnious notice in the mail once seized but reportedly any threats were never acted upon. Some independent sellers can get past customs (ask in thread).

Germany's customs: It is noted by anons that customs aren't very strict.

UK's customs: Noted by anons that customs aren't very strict, but there has been a few seizures.

GETTING AROUND CUSTOMS
If your packages are consistently getting seized then your address may have been blacklisted, or the sender's address has been blacklisted/flagged.
Use a forwarding service (note that this is especially relevant in the EU) to ship the package to a country with less strict customs to repackage your shipment, and then to ship from this closer location (depending on adjacency and customs rules the package may not have to pass through your country's customs, but this varies from country to country).